



$E_g$ : BAND GAP ENERGY  
 $h\nu$ : PHOTON ENERGY

FIG. 8 A PHOTON WITH AN ENERGY GREATER THAN  $E_g$  CAN EXCITE AN ELECTRON FROM THE VALENCE BAND TO THE CONDUCTION BAND. IF  $h\nu < E_g$ , PHOTON IS NOT ABSORBED BY THE MATERIAL.